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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,889	07/25/2003	Gregory V. Hofer	200208326-1	3820

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EXAMINER	
TRAN, NHAN T	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/627,889	HOFER, GREGORY V.	
	Examiner	Art Unit	
	Nhan T. Tran	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 7/25/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

2. Claim 16 is objected to because of the recitation of "the marker" in line 12 of the claim. This should be corrected to read as -- a marker --.

Claim 4 is objected to because of the recitation of "the position of a second object" in line 1 of the claim. This should be corrected to read as -- a position of a second object --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-12, 14-19, 21 & 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura et al. (US 5,631,697).

Regarding claim 16, Nishimura discloses a digital imaging device (a digital video camera shown in Figs. 9 & 12a in which digital images are realized at A/D converter 3), comprising:

an image sensor (2; see Fig. 9);

a lens (25) configured to focus (by AF motor 27) a first view of a scene (i.e., Fig. 10 or Fig. 12(b)) onto the image sensor;

a display (i.e., viewfinder shown in Fig. 10 & 12(b) and col. 10, lines 51-62) configured to display the first view of the scene (Fig. 10);

a processor (controller 29) configured to mark an object (Fig. 10) in the displayed first view of the scene (see Figs. 9 & 10 and col. 10, lines 51-62);

the display configured to display a second view (a subsequent view) of the scene where the object is no longer visible (this is the case when the object moves *so fast* that it is *completely* out of the camera field of view and out of the camera moveable range, i.e., *the object runs behind the mountain in view of Fig. 12(a), etc. or the camera is accidentally directed to another view other than the current view of the object*; thus, the object is no longer visible on the display by inherency);

the display configured to display a third view (another subsequent view) of the scene where the object is visible (i.e., the object is back to the view); the processor configured to remark the object in the displayed third view with the marker (see Fig. 10; col. 10, lines 42-62, and it is noted that *the claim does not require that the processor automatically remarks the object*; therefore, when the object is back to the view, the

user again marks the object using the switch 30 such that the controller 29 causes the marker generator 31 to remark the object for target tracking).

Regarding claim 17, as analyzed in claim 16 above, it is inherent in the imaging system of Nishimura that the object is no longer visible in the second view due to a change in the field of view of the digital imaging device (the camera is accidentally directed to another view other than the current view of the object).

Regarding claim 18, see the analysis of claim 16 in which the object is no longer visible in the second view of the scene due to a movement of the object.

Regarding claim 19, Nishimura also discloses all limitations for a digital imaging device as discussed in claim 16 above. Nishimura further discloses a control (switch 30 in combination with controller 29 shown in Fig. 9) configured to allow user input into the digital imaging device (col. 10, lines 43-62); a processor (target tracking processor 6 in combination with controller 29) configured to monitor the control; the processor configured to establish an initial frame of reference (Fig. 10) when detecting user input from the control; the processor configured to display a marker (Fig. 10) on the display at a predetermined location (center location or predetermined changeable location within the display screen in Fig. 10; col. 10, lines 55-62) with respect to the initial frame of reference (see col. 10, lines 51-62); the processor configured to compare multiple views of the scene (see Fig. 6 for details of a comparator of the target tracking processor 6),

captured by the image sensor, to track the movement of the digital imaging device with respect to the initial frame of reference (col. 5, line 31 – col. 7, line 13 in which the movement of the object is tracked from frame to frame by comparing the image data of a previous scene stored in memory 13 with a current frame), whereby the marker is displayed when the predetermined location is within the field of view of the digital imaging device (see Fig. 10 and col. 10, line 51 – col. 11, line 17, and note that the marker is displayed *at that moment* of Fig. 10 when the object is within the field of view of the digital camera).

Regarding claim 21, as clearly shown in Fig. 10 and col. 10, lines 55-62, the object is marked by centering the object in the display, and then activating the control (by pushing the switch 30 twice).

Regarding claim 22, all limitations of claim 22 are also met by the analyses of claims 16 and 19.

Regarding claims 1-3, these method claims are also met by the analyses of apparatus claims 16-18, respectively.

Regarding claim 4, as analyzed in claims 16 & 19, the object (let's say first object for reference) has gone invisible in the second view. In this case, the user can select a second object (i.e., a second person behind the previous first person in the second

scene; see Fig. 10 as a reference) by marking with a second marker, and the marker is displayed at that moment when the second object is visible in a displayed view of the scene (see col. 10, lines 51-62, wherein the user can manually select any object in any scene at any time for tracking).

Regarding claim 5, Nishimura discloses that the method is used in a digital camera (see claim 16 for a digital video camera).

Regarding claim 7, it is clear that the display is a viewfinder in a camera (see Fig. 12(a) and col. 10, lines 56-62).

Regarding claim 8, the scene is displayed on a display (the electronic viewfinder shown in Fig. 12(a) and col. 10, line 59) on the back of a camera (it is noted that since "the back of a camera" is broadly recited, the examiner interprets it as the side where the electronic viewfinder is located as shown in Fig. 12(a)).

Regarding claim 9, see the analysis of claim 21.

Regarding claim 10, this method claim is also met by the analyses of claims 16 and 19, wherein the first frame is the first view, and the second frame is the second view. The first and second frames are compared by the comparator in the target

tracking processor 6 shown in details in Fig. 3 as analyzed above for tracking the displacement of the views, i.e., the movement of objects.

Regarding claim 11, this claim is also met by the analysis claim 10 by repeating the steps in claim 10 for tracking another frame (or so called a current frame at this instant time) from a previous frame.

Regarding claim 12, see the analysis of claim 11 for repeating steps so that the object is continuously tracked over several frames to hundred or thousand frames until the user stops the camera.

Regarding claims 14 & 15, see the analyses of claims 7 & 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, 13, & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US 5,631,697) in view of Qian et al. (US 6,226,388).

Regarding claim 20, although Nishimura discloses a marker as discussed in claims 16 & 19, Nishimura does not teach that the marker is displayed as a set of square brackets that enclose the object. However, Qian suggests that an indication to a tracked object on a display can be represented by highlighting or **any other means for identifying the object from the image** (see Qian, col. 4, lines 53-65).

Therefore, it would have been obvious to one of ordinary skill in the art to use a set of square brackets enclosing the object as the marker so that the object would not be obstructed by the marker as in the case of crosshair in Nishimura, thereby enhancing the image view.

Regarding claims 6 & 13, these claims are also met by the analysis of claim 20.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NHAN T. TRAN
Patent Examiner